AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 35. (Cancelled)

36. (New) A light-emitting panel comprising:

a plurality of unhoused light-emitting diodes and a carrier, the light-emitting diodes being arranged on the carrier and being electrically contacted,

a fluid-tight film, a plurality of said light-emitting diodes being arranged between sections of said carrier and said fluid-tight film and being shielded from environmental influences by said film,

wherein said film is optically functional and influences light emitted by the light-emitting diodes.

37. (New) The light emitting panel according to claim 36, wherein the film is held at a distance from the light-emitting diodes by spacer elements.

38. (New) The light-emitting panel according to claim 36, wherein the fluid-tight film contains dyes or phosphors for frequency conversion or filtering.

39. (New) The light-emitting panel according to claim 36, wherein the fluid-tight film

contains structures which act in an optically refractive or diffractive manner, for at least one of collimating, focussing, expanding and of deflecting light which is emitted by the diodes.

40. (New) The light-emitting panel according to claim 34,

wherein the fluid-tight film contains a first layer construction and a second layer construction, the first and second layer constructions being arranged next to one another and together forming a layer system which defines a plane of layering which is the x-y plane of a Cartesian coordinate system,

wherein the first layer construction comprises at least one layer containing a fluorescent dye or diffusers, wherein an optical refractive index of the layer or of each layer of the first layer construction, respectively, is smaller than an optical refractive index of the layer or of each layer of the second layer construction, respectively, wherein the second layer construction is arranged on a side of the fluid-tight film facing the light-emitting diodes, and

wherein a transition between the first and the second layer construction contains boundary surfaces which form an angle to the plane of layering, or wherein the transition is waved.

41. (New) The light-emitting panel according to claim 40, wherein an outer limitation of the film, thus, a transition between the first layer construction and a surrounding medium, contains boundary surfaces which form an angle to the plane of layering, or wherein the outer limitation is waved.

42. (New) The light-emitting panel according to claim 41, wherein a variation of the position in the z-direction of the transition between the first and the second layer constructions in the Cartesian coordinate system is at least 2/3 of a thickness of the first layer construction, and the course of the transition between the first and the second layer constructions correlates to the course of the transition between the first layer construction and the surrounding medium, and wherein the thickness of the first layer construction is at least approximately constant as a function of the x- and y-position.

43. (New) The light-emitting panel according to claim 40, wherein the angle between boundary surfaces between the first and the second layer construction and the x-y plane is between 12° and 45°.

44. (New) The light-emitting panel according to claim 40, wherein the first layer construction apart from said layer containing the fluorescent dye or diffusers also comprises a first transparent protective layer terminating the film to the surrounding medium.

45. (New) The light-emitting panel according to claim 44, wherein the first layer construction further comprises a second transparent protective layer arranged on a side of said layer containing the fluorescent dye or diffusers, said side lying opposite the first protective layer.

46. (New) The light-emitting panel according to claim 40, wherein the refractive

index of each layer of the first layer construction is at most 1.5, and the refractive index of each layer of the second layer construction is at least 1.6.

47. (New) The light-emitting panel according to claim 36, wherein a concave-mirror-like or aperture-like optical element is allocated to each light-emitting diode or each unit of several light-emitting diodes arranged next to one another, by way of which the light emitted by the light-emitting diode or by the light-emitting diodes may be collimated in each case in a certain spatial angle about an optical axis, wherein the concave-mirror-like or aperture-like elements of at least one sub-group with several light-emitting diodes or units of light-emitting diodes are aligned such that the optical axes of the sub group converge, and wherein the light produced by the light-emitting diodes of the sub-group, at the location of the film at least partly superimposes, and wherein at least two light-emitting diodes of the sub-group have emission wavelengths which are different to one another.

48. (New) The light-emitting panel according to claim 47, wherein the film contains a fluorescent dye and wherein the light-emitting diodes of each sub-group emit blue and/or ultraviolet light at different wavelengths.

49. (New) The light-emitting panel according to claim 47, wherein the film contains diffusers and wherein each sub-group comprises at least one light-emitting diode emitting blue light, one light-emitting diode emitting green light and one light-emitting diode emitting red light.

50. (New) The light-emitting panel according to claim 47, wherein an opaque mask layer is present on a side of the film facing the light-emitting diodes, wherein the mask layer comprises recesses where the spatial angles of the light-emitting diodes of the sub-group or the sub-groups intersect.

51. (New) A layer system for the at least partial conversion of primary light incident from a first side into secondary light radiated onto a second side, comprising:

a first and a second layer construction, wherein the first and the second layer construction are arranged next to one another and together form a layer system, which defines a plane of layering being the x-y plane of a Cartesian coordinate system,

wherein the first layer construction comprises at least one layer containing a fluorescent dye or diffusers, for the at least partial conversion of the primary light into the secondary light,

wherein an optical refractive index of the layer or of each layer of the first layer construction, respectively, is smaller than an optical refractive index of the layer or each layer of the second layer construction, respectively, and

wherein a transition between the first layer construction and the second layer construction contains boundary surfaces which form an angle to the plane of layering, or wherein the transition is waved.

52. (New) The layer system according to claim 51, wherein an outer limitation of the film, thus a transition between the first layer construction and a surrounding medium, contains boundary surfaces which form an angle to the plane of layering, or wherein

the outer limitation is waved.

53. (New) The layer system according to claim 52, wherein the variation of the position in the z-direction of the transition between the first layer construction and the second layer construction in the Cartesian coordinate system is at least 2/3 of a thickness of the first layer construction, and the course of the transition between the first layer construction and the second layer construction correlates to the course of a transition between the first layer construction and the surrounding medium, and wherein the thickness of the first layer construction is at least approximately constant as a function of the x- and y-position.

54. (New) The layer system according to claim 51, wherein the angle between boundary surfaces between the first and the second layer construction and the x-y plane is between 12° and 45°.

55. (New) A light-emitting panel with a carrier element and a multitude of unhoused light-emitting diodes arranged thereon, comprising:

a covering which covers at least some of the light-emitting diodes,

the covering containing a conversion dye, wherein the covering is deposited directly on said light-emitting diodes comprising the covering, and wherein the covering follows the shape of the light-emitting diodes.

56. (New) The light-emitting panel according to claim 55, wherein the thickness of the covering is maximally 10 µm.

57. (New) The light-emitting panel according to claim 55, wherein the covering contains an outer second protective layer, and a layer containing the conversion dye,

58. (New) The light-emitting panel according to claim 57, wherein the covering further comprises a first protective layer bearing directly on the light emitting diodes.

59. (New) The light-emitting panel according to claim 55, wherein the covering in each case is only present locally in the vicinity of each light emitting diode, and sections not provided with the covering are present between the light emitting diodes.

60. (New) The light-emitting panel according to claim 55, wherein a contact surface of each light emitting diode is electrically connected to a contact pad via a wire bond, and wherein the first contact surface and the contact pad are coated with the covering.

61. (New) The light-emitting panel according claim 55, wherein a contact surface of each light emitting diode as well as a contact pad are free from the covering, and wherein the covering, the contact surface and the contact pad are coated with a transparent, electrically conductive layer, or wherein the contact surface and the contact pad are electrically connected to a strip-like, metallic layer.

62. (New) The light-emitting panel according to claim 55, wherein the total volume

of the covering per light-emitting diode covered by it exceeds the volume of the light-emitting diodes at the most by a factor of 2, and wherein the covering covers all open sides of the light-emitting diodes.

63. (New) The light-emitting panel according to claim 55, wherein the covering contains a layer system for the at least partial conversion of primary light incident from a first side into secondary light radiated onto a second side, the layer system comprising a first and a second layer construction, wherein the first and the second layer construction are arranged next to one another and together form a layer system, which defines a plane of layering being the x-y plane of a Cartesian coordinate system, wherein the first layer construction comprises at least one layer containing a fluorescent dye or diffusers, for the at least partial conversion of the primary light into the secondary light, wherein an optical refractive index of the layer or of each layer of the first layer construction, respectively, is smaller than an optical refractive index of the layer or each layer of the second layer construction, respectively, and wherein a transition between the first layer construction and the second layer construction contains boundary surfaces which form an angle to the plane of layering, or wherein the transition is waved.

64. (New) A method for manufacturing a light-emitting panel, comprising the steps of:

providing a carrier element with a plurality of unhoused light-emitting diodes and

subsequently coating, at least in regions, the carrier element with the light-

emitting diodes with a covering in a batch process, said covering containing conversion dye for the at least partial conversion of the electromagnetic radiation emitted by the light-emitting diodes, into longer-waved radiation.

65. (New) The method according to claim 64, wherein the conversion dye is deposited by way of a vacuum coating method.

66. (New) The method according to claim 65, wherein an optically transparent protective layer is deposited after the deposition of the dye and preferably also before the deposition of the dye.

67. (New) The method according to claim 66, wherein simultaneously with the deposition of the conversion dye, transparent material is also deposited, so that it is mixed with the dye in the deposited layer.

68. (New) The method according to claim 64, wherein a layer thickness of the dye layer is 500 nm at the most.

69. (New) The method according to claim 64, wherein a contact pad and a contact surface are electrically connected to one another via a wire bond before the coating step.

70. (New) The method according to claim 64, wherein the coating with the conversion dye is effected through a shadow mask, so that a structured color

conversion layer arises.

71. (New) The method according to claim 70, wherein the coating with the covering is effected through a second mask which covers the first contact surfaces and the contact pad, and wherein the subsequent coating with the transparent, electrically conductive material is effected through a first mask which covers intermediate spaces between light-emitting diodes such that electrically conductive material proportions attributed to adjacent light-emitting diodes do not come into contact with one another.